FY2019 R&D Strategy Briefing

October 25, 2019

FUJITSU's R&D Strategy
FUJITSU's R&D Strategy

Hidenori Furuta
Corporate Executive Officer
SEVP, Technology Solutions Business, Japan Sales, CTO and CIO
SEVP, Head of Technology Solutions Business
Fujitsu Laboratories Limited, Director Chairman
This page is a message from Takahito Tokita, Fujitsu’s president, delivered at his Management Direction briefing on September 26.

President Tokita explained how, up until now, Fujitsu has delivered products and services as a traditional IT company.

Now Fujitsu must become a technology-based company that provides value by resolving issues facing our customers and society.

To realize this Fujitsu is focusing on changing from an IT company to a digital transformation company.

As a digital transformation company, Fujitsu will create a virtuous circle for the environment, society and business.

Our mission is to promote the wellbeing of as many people as possible through technology.
• Our competitors are using a variety of methods to promote their digital transformation business. Fujitsu is using its strengths and unique points to build its digital transformation business.

• Our company’s greatest strengths, particularly in Japan, lie in the technology and the business and industry expertise we have accumulated over the years through working closely with our customers.

• We do, however, recognize that we have been unable to fully leverage these strengths in the past.

• To resolve this we are promoting data utilization through technology, building a business model that will generate value through services, solutions and consulting.

• This is our R&D Strategy Briefing, and I will focus on technology.
• This is Fujitsu’s value chain. On the far left are our customers. Upstream consulting services lead into these other areas to the right, but today I would like to focus on the section labelled “Resource Concentration on Key Technology Fields."

• The Fujitsu Group is a huge organization that has many development teams within various business units. The central organization that provides our cutting-edge technologies, and will support our digital transformation, is Fujitsu Laboratories where this event is being held today.

• In order to deploy these technologies into the business as quickly as possible, the entire Fujitsu Group is rapidly implementing this series of process developments.
• Technology is crucial to achieving digital transformation.

• Fujitsu has decided to concentrate resources in seven key technology fields.

• We are enhancing Fujitsu’s unique strengths in each field.

• We will continue to conduct research and development into technology essential for a new services and solutions business that can resolve issues facing our customers and society.

• Next, I would like to explain the direction our R&D work will take in each of the seven key fields.
• The first is computing and Content-Aware Computing shown on the upper right of the slide.

• There is always a need for greater computing power and lower energy consumption levels when resolving various issues within society.

• Recently, there has been a sharp increase in the amount of computation required for AI.

• Fujitsu is aiming to create computing technology that can solve complex social issues using optimal resources within the next three years.

• Fugaku, the recently announced world-leading supercomputer and successor to the K computer, is currently under construction and is expected to be launched during the next fiscal year.

• Digital Annealer is another of our computing technologies, and later today an announcement will be made about a new technology that will improve computing performance.
There is on-going scrutiny of AI technology usage in society, and I would like to touch on AI accountability and ethics and the steps Fujitsu is taking in these areas.

Fujitsu Lab, CEO Hirotaka Hara will explain details later at his presentation.

As shown on the right, in March of this year, we published the “Fujitsu Group AI Commitment”

In addition, we established the Fujitsu Group External Advisory Committee on AI Ethics in September.

With these measures in place we will continue to develop and commercialize AI technology, while seeking knowledge and insight from external experts.

We are expanding our business and designing a trusted future using data and AI technologies.
• A great deal of attention has been focused on the use of data in growing and transforming businesses.

• However, concerns about the trustworthiness of data including the safe exchange of data, ownership of personal data and bias in AI training data; has been a major obstacle.

• This is why Fujitsu is developing technologies that provide a highly trusted data management system as a digital native in a data-driven society.
• With the expansion of the cloud market, Fujitsu is focused on providing cloud solutions that support our customers who are undergoing their own digital transformation.

• Specifically we are aiming for managed service automatization and cloud native development.

• We are not planning to develop everything in-house but instead strengthen our collaboration with cloud vendors. We also want to co-create innovative solutions with our customers and partners.
• Within the 5G domain there is a demand to build new service models across industries by connecting various digital technologies.

• Fujitsu is developing network technology that seamlessly connects increasingly diverse data and apps, and provides benefit for everyone.

• Fujitsu has collaborated with Ericsson to commercialize base stations that support 5G and we are expanding this business into the enterprise field.

• We will also promote the development of distributed ICT and create spaces for user experience of 5G.
• It is predicted that by 2020 the number of devices connected to the worldwide network will reach 80 billion.

• In order to make full use of these connected devices, and create new value, it will become increasingly important to process data and applications in real time, and to deliver experiences that are aware of context and social value using data.

• For this reason, Fujitsu is undertaking research and development into Real Time Digital Twin, a technology to process large-scale data and applications in real time and improve the user experience.

• In order to provide new services for mobility we have recently developed telematics technology, codenamed Dracena, which can handle vehicle information from over 10 million vehicles, and technology to digitize the characteristics of a user’s gait.
As the threat of cyberattacks grows increasingly advanced and sophisticated day-by-day it is essential to have organization-wide security measures, including for the ICT environment, in place.

Fujitsu is developing technology and offerings that protect entire systems throughout the security lifecycle against a variety of risks arising from technological innovation.

For example, we provide services that make use of advanced security and cyber security countermeasures based on practical knowledge from cloud CSIRT activities.

In addition, we are developing biometric authentication encryption technologies that enable safe and secure cashless payments using a cloud environment.
• That was a high-level overview of our seven key technology fields.

• In July, the Fujitsu’s CTO Mission was officially defined, from a global technology governance perspective, as an efficient global technology management system is essential for technology development.

• Regional CTOs will be appointed to work in alignment with the Fujitsu Group’s CTO Office to support the growth of Fujitsu’s global services business. Their roles and responsibilities will be clearly determined to ensure objectives are achieved on a global basis.
• Briefly moving away from the R&D focus of this presentation I would like to mention the GDCs, which are located in 8 locations around the world, and the important role they play in the global business.

• The Fujitsu Group has recently announced its plan to increase the total headcount in the GDCs to 20,000 as GDC utilization is promoted across all the regions. The GDCs remain our most important and key asset in providing standardized and cost-competitive global IT services and solutions across the globe with a focus on high quality and excellent customer experience.

• We are not trying to strengthen our cost competitiveness simply through labor costs but are focusing on strengthening our global service delivery capabilities through the use of global hubs.

• By using GDC personnel, we are also strengthening our discernment with regard to technology from outside Japan, and expanding the scope of possibility to include developing technology that can be applied to global services.

• In a moment, CEO Hirotaka Hara will explain the global role of Fujitsu Laboratories.
Fujitsu will accelerate its growth as a new digital transformation company by leveraging the strengths it has accumulated over many years as an ICT company.

This includes pushing forward to develop cutting-edge technologies speedily for our solutions business.

We will identify investment areas within the seven key technology areas where potential profit growth can be expected from new products and services.

The changes in our portfolio are also being driven by changes in Fujitsu’s business.

It is imperative we understand how best to contribute to our customers and society in this era of digital transformation as this will determine where we invest in technology development.

There are still many opportunities in the market for Fujitsu to continue to grow and Fujitsu must change to achieve sustained growth and globalization.

Hirotaka Hara will now talk about Fujitsu Laboratories’ research and development strategy.